

## INVENTIONS BY NAVAL MEN.

Millions Saved to the Government By Their Inventions and Devices.

The first essential step in the modern navy was the construction of the modern high power rifles, requiring in their design a high order of mathematical ability and an intimate knowledge of the characteristics of modern steel. All guns in the navy have been designed by Professor Philip A. Alger, a former graduate of Annapolis, who has since been transferred to the corps of the professors of mathematics in the navy, and who is the highest authority on ordnance matters in this country, if not in the world. Professor Alger received a diploma from the World's fair commission for his system of gun construction, now in use in the navy.

In order to make these guns efficient, methods had to be devised for handling them on board ship, opening and closing the breech for loading, mounting them on carriages for sighting and training, protecting them with armor, supplying them with powder and shell, developing smokeless powder for their use, designing primers, fuses, telescopic sights, and a hundred little accessories used in connection with their service. It was also necessary to provide the necessary appliances for using the modern automobile torpedoes to be fired from our ships and torpedo boats, apparatus for signaling orders from the conning tower to the guns and to every part of the ship, for measuring the distance of the ship, for countermining harbors and clearing channels, and many other devices more or less directly connected with the ships as a fighting machine.

**MILLIONS SAVED.**  
To perfect these devices in foreign navies the government has had to pay millions of dollars for improvements and inventions that tended to make their guns and ships more powerful in their keen competition for supremacy. In this country, the home of the inventor, our government has paid little or nothing. Nearly every improvement has been invented by its naval officers. One instance of a naval officer who received a compensation for an invention was that of Chief Constructor Wilson, now retired, to whom the navy department paid \$10,000 for an air port-hinge. But most of the work of naval officers' brains has been given to the government free.

How much the inventive faculty of its keen-minded officers has meant to the navy department is illustrated in the case of Lieutenant Frank F. Fletcher, now on duty in the ordnance bureau. It was said at a hearing before a committee of the senate last winter, on a bill to give naval inventors compensation, that a gun-mount of Mr. Fletcher's had saved the government more than \$1,000,000. All the great guns are now placed upon this gun-mount, and the World's fair commission awarded it a diploma. Briefly described, and without nearly every improvement has been invented by its naval officers. One instance of a naval officer who received a compensation for an invention was that of Chief Constructor Wilson, now retired, to whom the navy department paid \$10,000 for an air port-hinge. But most of the work of naval officers' brains has been given to the government free.

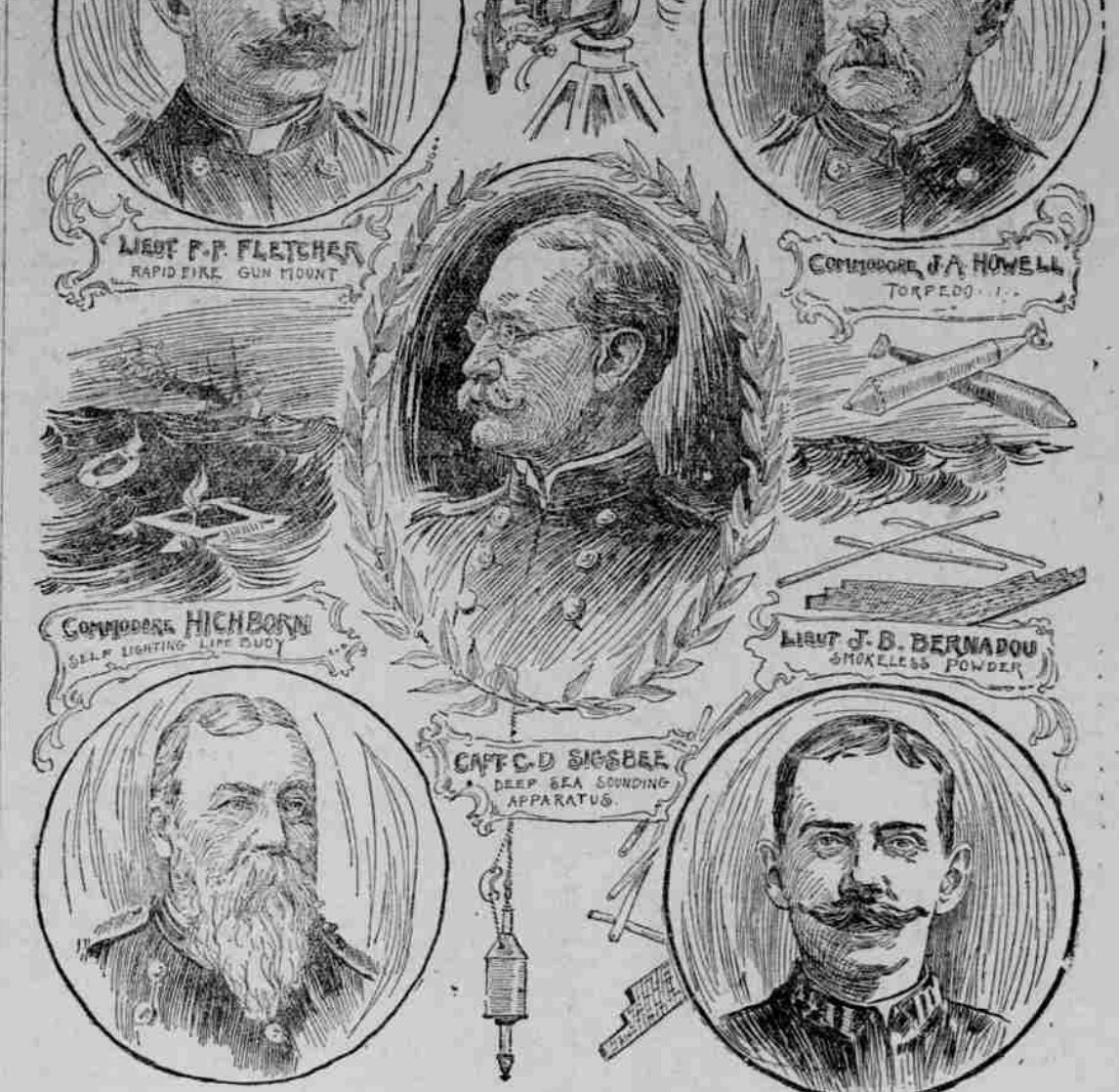
**FLETCHER'S MANY INVENTIONS.**  
Mr. Fletcher is the inventor of several other devices. One of these is a breech mechanism for heavy guns. This mechanism is used for handling all the heavy breech-plugs, weighing from 500 pounds to half a ton, of our eight-inch, ten-inch, 12-inch and 16-inch guns. The army has also recently adopted it. These plugs were formerly handled by hydraulic machinery, but Fletcher's device enabled this to be done by hand power by one man. So successful was the device that one man, with his left hand turning a crank, can unlock from the breech of the gun its plug, weighing 1,500 pounds, withdraw it to the rear, and swing it clear in seven seconds.

Just before the war with Spain began, Secretary Long recommended to congress an appropriation to build a big powder factory for making smokeless powder. At the same time he announced that a satisfactory smokeless powder had been made, after many years of experiment, and that this powder was superior to the smokeless powder made abroad. "Lieutenant J. B. Bernadou showed special aptitude for this work and capacity for the solution of the problem involved in the prosecution of experimental work of this nature," said the report of the inspector in charge of the torpedo station at Newport. This Lieutenant Bernadou is now at Key West, recovering from wounds received while in command of the Winslow at Cavendish Bay, in the navy department. "The navy is particularly proud of this achievement. Foreign governments possess smokeless powder, but it contains nitro-glycerine, which makes it unstable and dangerous, and, besides, develops a high heat, which soon ruins the gun. All countries have been working for the ideal smokeless powder containing no nitro-glycerine, and we are the first to get it. As in many other matters, our navy department stayed behind Europe in the adoption of a smokeless powder until we had one that was perfect."

Lieutenant R. A. Fiske, a prolific inventor in electric devices, made, some years ago, a range finder for automatically finding distances at sea. It is one of the most useful contrivances on ship-board, and is worth an immense sum to the navy. Another of Lieutenant Fiske's inventions was the Stadiometer—a very clever modification of the sextant, by which it is possible to measure the distance of a ship from the height of its mast or smokestack. Still another was a range indicator—an electrical device for signaling from the conning tower to the gun captain the direction and distance of the enemy. This is fitted on nearly all our ships.

**SIGSBEE AN INVENTOR.**  
Captain Sigsbee of the St. Paul is an inventor. The navy now uses a deep-sea sounding apparatus and a parallel ruler for navigation of the invention. Lieutenant Dashiell invented a breech mechanism which was a great improvement on all that preceded it. It was adopted by the navy department in 1892, and was introduced on many rapid-fire guns. This device enabled a man at the breech to turn the gun to fire in any direction, and then withdraw it with another motion. But by an arrangement of cogs, Lieutenant Dashiell made the pull of a lever turn the gun until it was unlocked, and then withdraw it. The reverse motion of the lever drove the plug home, and then turned it until it locked. The Dashiell mechanism has been supplanted by the Hotchkiss mechanism, but it is still to be found on some rapid-fire guns.

Lieutenant W. H. Driggs and Lieutenant Seaton Schroeder are the inventors of a rapid fire mechanism which is of the same class as the well-known Hotchkiss gun. It is applied to 1-pounder and 6-pounder guns. This invention is owned by a private corporation, unlike most of the navy inventions which belong to the government. Commodore John A. Howell is the inventor of the automobile torpedo, which bears his name. Its mechanism consisted chiefly of a heavy cog-wheel made to revolve at a high rate of speed before the torpedo is put in the water. Lieutenant Joseph Strauss is the inventor of improvements in mounting turret guns. He conceived the idea of the double turret, having an eight-inch turret placed on top of a 13-inch turret as used on the battleships Kearsage and Kentucky, which were launched not long ago at Newport News.



OUR LEADING NAVAL INVENTORS.

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**HICHOBN'S LIFE BUOY.**  
Chief Constructor Philip Hichborn invented the Franklin life buoy and sold it to a concern in Bath, Me. It is a

self-lighting buoy. Two small tin cases attached to it contain phosphide of calcium. Stoppers to these cases are attached to the ship so that when the buoy is thrown into the water, the stoppers are withdrawn and when the buoy strikes the water, the combination of the chemical with the water makes a bright flame.

Lieutenant Very, late of the navy, devised a set of signals which are now in use not only in our navy, but in all the navies of the world. Lieutenant Herbert O. Dunn invented a stockless anchor which is in use on some naval vessels. Lieutenants Van Duzer and Mason were the inventors of an ingenious electric steering gear. Lieutenant Fiske and Lieutenant Lucien Young are the joint inventors of a boat-ditching apparatus. Chief Engineer Harrie Webster invented a clinometer, used to determine the angle of roll of a ship. Chief Engineer Nathan P. Towne is the inventor of an improved boiler. Lieutenants Dehl and Gibson are inventors of a "compensating binnacle," designed to neutralize the magnetism of a steel ship's hull. Passed Assistant Engineer To-

bin is the inventor of the famous Tobin bronze, much used for the hulls of racing yachts and for shells of torpedoes, and Professor C. E. Munroe is the inventor of the high explosive, "Jovite."

These are only samples of the many contributions to invention which naval officers have made. Their inventive talent and their skill in designing have made the ships of the United States navy superior in convenience and efficiency to those of most of the nations of Europe. In fact many foreign governments pay tribute to the superiority of American ideas in royalties on the inventions of American naval officers.

## LAGOON, TONIGHT.

Blowing Up the "Maine."  
Afternoon trains 1:00, 2:00, 3:00, 4:00, 5:30, 6:30, 7:30 and 8:30 p. m.

Experience is the best Teacher. Use Acker's English Remedy in any case of coughs, colds or croup. Should it fail to give immediate relief, money refunded. 25 cts. and 50 cts. For sale by Z. C. M. I. Drug Dept.

## MARVELOUS CALCULATIONS.

Peculiar Arithmetical Powers of An Illiterate Man.

Although the public has heard something of Rube Field, the mathematical prodigy of Hazel Hill, what has been said and written of him has generally been guesswork. He is the mathematical wonder of the world, as regards calculations. Rube is as illiterate as a savage and can instantly solve any mathematical problem. He would not recognize his name if it were placed before him in type three feet high, nor can he tell a figure seven from a cipher, yet he can tell how many grains of wheat piled upon each other would reach the sun, if you gave him the distance from the earth to the sun. Such a problem he considers quite simple, and will announce the answers by the time you have concluded the question. Rube is not easily engaged in conversation, and there is no person in the world to whom he would confide his secrets. No more to his mother than to you. He believes that all mankind is in league to take from him his gift, or, as he puts it, his "mystery." He regards every man in the same way, and that ungovernable fear will no doubt keep him out of sight of the public, as it has for the last 20 years.

Though he is mercenary to a degree in his dealings, he does not seem to possess any special aptitude for riches, but rather evinces the desire to see "fools," as he calls the human family, put to some expense on his account. It makes him feel big to have men hire him to be interviewed, and yet he will not make a public exhibition of himself—another evidence of his unusual composition.

He cannot tell how he manipulates figures and computes numerals as with a thought, and his inability to explain both his least of all who are aware of the fact. He says he is aware, if he could write an arithmetical with his system of calculation as a basis, he could make more money than the railroads, but he can't do it, and doesn't care anything about it. He is satisfied with his lot, and has great plans for the future. It is his belief that he came into this world to herald to men that beyond their vision of the science of numbers lies the key to all the mysteries of life. The great work he is to do upon earth has not been outlined to him by the Omnipotent, but will be.

## A FEW INTRICATE SUMS.

Taking him unawares, I asked: "Can you add \$2,884,412, 1,938,878 to \$9,598,624,135 to 1,846,023,091 to 14,374 without stopping to figure?"

"That makes 7,143,496,494," said he on the instant, and then he laughed at my surprise. As I called the numbers to him he added them, having the aggregate of the first two before I had finished the third, and of the whole while I caught my breath after enumerating them. Then I read him a column of figures ranging from tens to hundreds of thousands, the length of a sheet of legal cap, and he had furnished me an accurate aggregate the moment I finished.

Such an evidence of unexplained power will astonish the most credulous, but what must one think when such a character says he is a living walking, chronometer, and proves the same before you can dispute it. He mistrusts all men, and a financial consideration, together with the influences of acquaintances, is necessary to set his tongue going, which done, he keeps you busy listening, for he talks like a torrent rushing, swarms with the fury of a cyclone and calculates with the rapidity of electric pulsations. I employed him to be interviewed for one hour, and desiring to test him as to his knowledge of time without giving him an opportunity to consult a timepiece, I asked:

"What is the time now, professor?" (He delights to be called "professor.") "Twenty-five and one-quarter minutes after 3," he replied. I reached for my watch to see if he was right, and before I could say, "Your watch is one and one-quarter fast," he said: "How do you know?" I asked, "I can't tell you, but I am right," he said. As the watch was the Western Union regulator proved. I then concluded to test him further, and resolved that I would say nothing of it when his work was done, and noted if he knew it. Imagine my surprise, when in the middle of a problem he stopped me and announced that his time was up, and consulting my watch I found him right to a second.

## EXAMPLES OF REMARKABLE SIGHT.

Previous to that I had asked him the time in St. Petersburg, and he stated it correctly, saying that he was conscious of the degrees of longitude and latitude in all his calculations of time. He knows their location and can answer any question of time when ever asked. Often he has been aroused from sound sleep, and upon being asked he would state it accurately while rubbing his eyes.

Reading the dial plate of a clock in Berlin, he says, is no more trouble to him than that of a watch in my pocket, and in this he brings proof of the assertion that he is conscious of every correct clock tick in the world, whether sleeping or awake. Consulted and stated loss for slipping of the wheel in each mile traveled, and he will instantly tell you how many revolutions the wheel will make in traveling that distance.

His memory is almost as remarkable as his calculating genius. Having heard any statement he will remember it, and though he may not understand words he hears, he will use them in the same or a similar sense to that in which they were used when he heard them. By this means he has a vocabulary far in advance of other illiterates.

Speaking of his youth, he said he remembered no change, so far as his knowledge of things is concerned, since his 7th year, at which time he came into possession of his "mystery." He is not fond of his relatives, who, he believes, would make a fortune at his expense if he were not so smart as to prevent it. They used to call him a fool, and he hasn't forgiven them for that.—Kansas City Times.

## Discovered By a Woman.

Another great discovery has been made, and that, too, by a lady in this country. "Disease fastened its clutches upon her, and for seven years she understood its severest tests, but her vital organs were undermined, and death seemed imminent. For three months she coughed incessantly, and could not sleep. She finally discovered a way to recovery, by purchasing of us a bottle of Dr. King's New Discovery for Consumption, and was so much relieved on taking first dose, that she slept all night; and with two bottles, has been absolutely cured. Her name is Mrs. Luther Lutz. Thus writes W. C. Hamrick & Co., of Shelby, N. C. Trial bottles free at Z. C. M. I. drug store. Regular size 50c and \$1. Every bottle guaranteed.

## Counting the Cost.

Chicago Tribune: Naval Commander—To give you the information you ask, young man, would be premature, and might cost us two or three battleships.

Correspondent—But good heavens, if I don't get that information it may cost me my job!

Dyspepsia can be cured by using Acker's Dyspepsia Tablets. One little Tablet will give immediate relief, or money refunded. Sold in handsome tin boxes at 25 cts. For sale by Z. C. M. I. Drug Dept.

Ask for Hewett Bros' Three Crown Triple Flavoring Extracts. For sale by all grocers.

## BIG SALE OF FANCY WHITE GOODS.

Fresh, pure white summery beauty, in snow-banks of loveliness.

NEVER WAS WHITE SO WANTED.

NEVER WERE PATTERNS SO PRETTY.

NEVER WERE PRICES SO LOW.

50 pieces white pin striped dimities, worth 12½c, this week, yard	7½c
1,000 yards white checked dimities, worth 15c, this week at yard	8½c
Tufted White India Linons, regular price 20c, this week at yard	12½c
Hemstitched and Satin Striped Batistes, value 25c, go this week at, yard	17½c
Genuine Imported Pin Dot Swisses, value 35c, this week, per yard	22c
All the Beautiful, Fancy Woven White Goods Novelties. All the Plaid and Satin Striped White Grenadines. White Crepons, and Tucked Effect White Goods	

## AT SPECIAL SALE PRICES

## The Best and Largest Stock of Wash Goods

At an enormous sacrifice, Lovely 1½c dimities, Organdies, and Tambour muslins, in dark and light colors, worth 15c and 20c, this week, per yard	11c
A variety of wash goods, the largest collection you ever saw at one price; all kinds, every color, newest and most beautiful patterns. Choice of all this week, at per yard	15c
Finest Imported Organdies in the newest and loveliest patterns and colors, and as sheer as silk mull. Nothing nicer for a summer dress. Regular 45c Organdies, this week, per yard	22c
New Metallic Skirtings, in shaded plaid effect, the latest Skirt novelty, worth 45c, this week per yard	33½c

## NOTE OUR SPECIALS IN

## BOYS' CLOTHING DEPARTMENT

Men's gauze underwear, shirts and drawers, sizes 32 to 44, special 20c each.	All wool bicycle hose, in fancy checks, red and blue and fancy mixtures, regular price 75c, special 35c
Great slaughter in Boys' and Children's Straw Hats. Our entire stock reduced 33 ⅓%.	Boys' Summer Knee Pants Suits in checks, stripes and fancy cloths, ages 4 to 16, fine values, regular price \$3.75, special \$2.45
Our line of Gents' Negligee Golf Shirts is the most complete in the city. Don't fail to see our styles and prices.	Boys' Sack Suits, assorted fancy cloths, Italian cloth lining, finely tailored, double seat and knee, ages 6 to 15, extra value at \$5, special \$3.10
Children's Blouse Waists, white large sailor collar, embroidered ruffle, open embroidery work, fine quality, ages 4, 5, 6, 7 and 8. Prices range from 50c, 65c, \$1.00, \$1.25, \$1.50, \$1.75	Boys' Reefer Jacket Suits, excellent value at \$2.75, special \$1.75

## THERE'S ECONOMY IN BUYING.

Children's Dresses ready to wear. You get prettier styles and save money and labor. See them this week.

## CHILD'S DRESSES.

A pretty little child's dress of fast colored gingham in checks and stripes, neatly trimmed in braid. Sizes 1 to 4 years. A splendid article at—29c

## 4 SPLENDID STYLES AT 50c EACH

These are beautiful little dresses for children 1 to 4 years old, made of fast colored materials, pretty and stylish designs. You can't duplicate any of them at less than 75c each. Our price for the week is—50c

## MISSIE'S WHITE DRESSES.

A beautiful line of neat, desirable styles in all sizes, at prices which make home sewing an extravagance.

## MISSIE'S DRESSES.

ALL SIZES, AT 65c  
Made of fast colored plaid gingham, embroidery trimmed, for misses 4 to 14 years, don't miss this number. It's a rare bargain for—65c

## AT \$1.50 EACH.

We are showing a magnificent assortment of children's dresses in sizes 4 to 14 years, most handsome designs in fine Foulards, Madras cloth and Zephyr Gingham, elegantly trimmed. These are matchless bargains at, each—\$1.50

## MISSIE'S DRESSES AT 95c EACH.

Without a doubt the greatest bargains in ready to wear dresses for misses 4 to 14 years ever shown in this city. See them this week!

## SHOE DEPARTMENT.

All Short Lines Must be Closed Out at Once. Notice these Prices:

Ladies' fine kid button shoes, our \$3.00 quality, This week at \$1.59	One lot ladies' tan Oxfords, \$3.50 quality, Sale price \$2.15
Curtis & Wheeler ladies' high grade Oxfords, \$3.50 quality, Sale price \$1.98	Ladies' fine tan Oxfords, turns, were \$2.25, Sale price \$1.24
Good grade ladies' tan Oxfords, valued at \$1.75, 84c.	Ladies' black Oxfords, pat tip, All sizes, cheap "59c
Misses' tan shoes, lace and button at half price, 11½ to 2, \$1.15. 8½ to 11, 98c. 6 to 8, 85c	Ladies' white canvas Oxfords. 50c Pair.

## T. Auerbach &amp; Bro.

## THERE'S MONEY IN IT FOR YOU

To visit our store this week. In order to reduce stock before the 4th of July in every department, radical Reductions have been made, and you'll find splendid opportunities for buying bright, NEW GOODS, worth double the price asked. The extraordinary offerings will crowd our store tomorrow and throughout the week.

## SHIRT WAISTS—

Every Waist advertised below is a splendid value. Our assortment of styles and Materials and Low Prices on Shirt Waists cannot be equalled in the city.

29c EACH. 47 Dozen Ladies' Fancy Striped Shirt Waists, detachable collar, attached cuffs, etc.	39c EACH. Very attractive line of Shirt Waists in Checks, Plaids, Stripes, etc., nice fitting, large assortment of colors.	59c EACH. 120 Dozen Nobby Shirt Waists, splendid fitting, in large variety of patterns and shades.
90c AND \$1.00 EACH. At this price we'll offer some exceptional values in nobby, stylish patterns from best manufacturers.	BALANCE OF OUR NOVELTY WAISTS In Organdies, Gingham, Estamines, Chevrons, etc., at further REDUCED PRICES.	\$1.25 EACH. Over 75 Dozen elegant Shirt Waists in large and beautiful array of colorings and patterns.

## PARASOLS. A SPECIAL GRAND SALE OF PARASOLS

In black, white and colors. In order to reduce the largest stock of Parasols in the city before the 4th of July, we've decided to make special GREAT REDUCTIONS to move them quick.

WHITE PARASOLS In plain China Silk or BLACK PARASOLS in Gloria silk, with one ruffle. Special—\$1.20	SPECIAL FOR \$1.35. Nobby White Parasol with one ruffle, value \$1.85. Special—\$1.35	Ladies' White Parasols In China Silk, extra nice quality, with one ruffle, in White or Black. Special for—\$1.50
SPECIAL FOR \$1.65. Fine White China Silk Parasols, with 2 ruffles, value \$2.25, \$1.65. Also in Black.	ENTIRE STOCK OF of Fine White, Black, or Colored Sun-shades at Special reduced prices.	CHILDREN'S PARASOLS Immense Variety of Colors, sizes from 10 to 30 inches, at prices from 20c to—\$1.75

## SEPARATE DRESS SKIRTS.

Hundreds of Nobby Styles in white pique, white duck, linen, silk, brilliantine and serge at lowest prices, to reduce stock before the 4th of July.

Linen Dress Skirts 75c. Nice Dark Linen Dress Skirt, value \$1.00. Special—75c	WHITE DUCK SKIRT. Good quality, fine fitting. Special for—\$1.00	SILK STRIPED Linen Skirt with embroidered trim bottom. Special for—\$2.35
BLACK BRILLIANTINE Dress Skirts nicely lined, Velvet bound. Value \$2.25, \$1.75	Large assortment of White PIQUE AND DUCK Skirts in Plain, Corded or Tucked Effects, from \$1.75 to—\$6.25	Fine line of Nobby Bayadere DRESS SKIRTS In Black, Navy, Red, Green, etc. Special for—\$3.75